

# Claims

[c1] We claim as our invention:

1. A golf ball comprising:

a solid core composed of a polybutadiene blend and having a diameter in the range of 1.35 inches to 1.64 inches;

an intermediate layer disposed about the core; and  
a cover disposed over the intermediate layer, the cover having a thickness ranging from 0.015 inch to 0.044 inch;

wherein the golf ball has a ball Shore D hardness ranging from 45 points to 75 points as measured on the surface of the golf ball, the golf ball has a coefficient of restitution at 143 feet per second greater than 0.7964, and the golf ball has an USGA initial velocity less than 255.0 feet per second.

[c2] 2. The golf ball according to claim 1 wherein the intermediate layer has a Shore D hardness ranging from 50 points to 75 points as measured on the curved surface of the intermediate layer.

[c3] 3. The golf ball according to claim 1 further comprising a thread layer wound around the intermediate layer.

- [c4] 4. The golf ball according to claim 1 wherein the golf ball has a diameter of 1.68 inches to 1.70 inches.
- [c5] 5. The golf ball according to claim 1 wherein the cover is composed of a material selected from the group consisting of thermosetting polyurethane, thermoplastic polyurethane, ionomer, polyether amide, polybutadiene, and any mixture thereof.
- [c6] 6. The golf ball according to claim 1 wherein the golf ball has a ball Shore D hardness of approximately 65 points as measured on the surface of the golf ball.
- [c7] 7. The golf ball according to claim 1 wherein the golf ball has a ball Shore D hardness of approximately 60 points as measured on the surface of the golf ball.
- [c8] 8. The golf ball according to claim 1 wherein the core has a diameter in the range of 1.45 inches to 1.55 inches.
- [c9] 9. The golf ball according to claim 1 wherein the intermediate layer is composed of an ionomer blend of fifty parts of a sodium neutralized high acid methacrylic acid ionomer and fifty parts of a zinc neutralized high acid methacrylic acid.
- [c10] 10. A golf ball comprising:

a solid core composed of a polybutadiene blend and having a PGA compression ranging from 75 points to 120 points;

an intermediate layer disposed about the core, the intermediate having a Shore D hardness ranging from 50 points to 75 points as measured on the curved surface of the intermediate layer, the intermediate layer composed of a thermoplastic material;

a cover disposed over the intermediate layer, the cover having a thickness ranging from 0.015 inch to 0.044 inch, the cover composed of a thermosetting polyurethane material;

wherein the golf ball has a coefficient of restitution at 143 feet per second greater than 0.7964, and an USGA initial velocity less than 255.0 feet per second, and the golf ball has a ball Shore D hardness ranging from 45 points to 75 points as measured on the surface of the golf ball.

[c11] 11. The golf ball according to claim 11 wherein the golf ball has a coefficient of restitution at 143 feet per second greater than 0.8015.

[c12] 12. The golf ball according to claim 11 wherein the golf ball has a coefficient of restitution at 143 feet per second greater than 0.8150.

[c13] 13. A golf ball comprising:  
a solid core composed of a polybutadiene blend, having a PGA compression ranging from 75 points to 120 points, and having a diameter ranging from 1.35 inches to 1.64 inches, the core having a mass ranging from about 32 grams to about 40 grams;  
an intermediate layer disposed about the core, the intermediate layer composed of an ionomer material, having a Shore D hardness ranging from 50 points to 75 points as measured on the curved surface of the intermediate layer, and the intermediate layer having a thickness ranging from 0.040 inch to 0.09 inch; and  
a cover disposed over the intermediate layer, the cover composed of a polyurethane material, the cover having a thickness ranging from 0.015 inch to 0.044 inch;  
wherein the golf ball has a coefficient of restitution at 143 feet per second greater than 0.7964, and an USGA initial velocity less than 255.0 feet per second, and the golf ball has a ball Shore D hardness ranging from 50 points to 75 points as measured on the surface of the golf ball.

[c14] 14. The golf ball according to claim 14 wherein the cover has a thickness ranging from 0.020 inch to 0.0375 inch.

[c15] 15. The golf ball according to claim 14 wherein the cover has a thickness ranging from 0.025 inch to 0.035 inch.

- [c16] 16. The golf ball according to claim 14 wherein the cover has a thickness of 0.030 inch.
- [c17] 17. The golf ball according to claim 14 wherein the core has a PGA compression ranging from 100 to 110 points.
- [c18] 18. The golf ball according to claim 14 wherein the core has a PGA compression of 110 points.
- [c19] 19. The golf ball according to claim 14 wherein the golf ball has a coefficient of restitution at 143 feet per second greater than 0.8150.